



Association of American
State Geologists



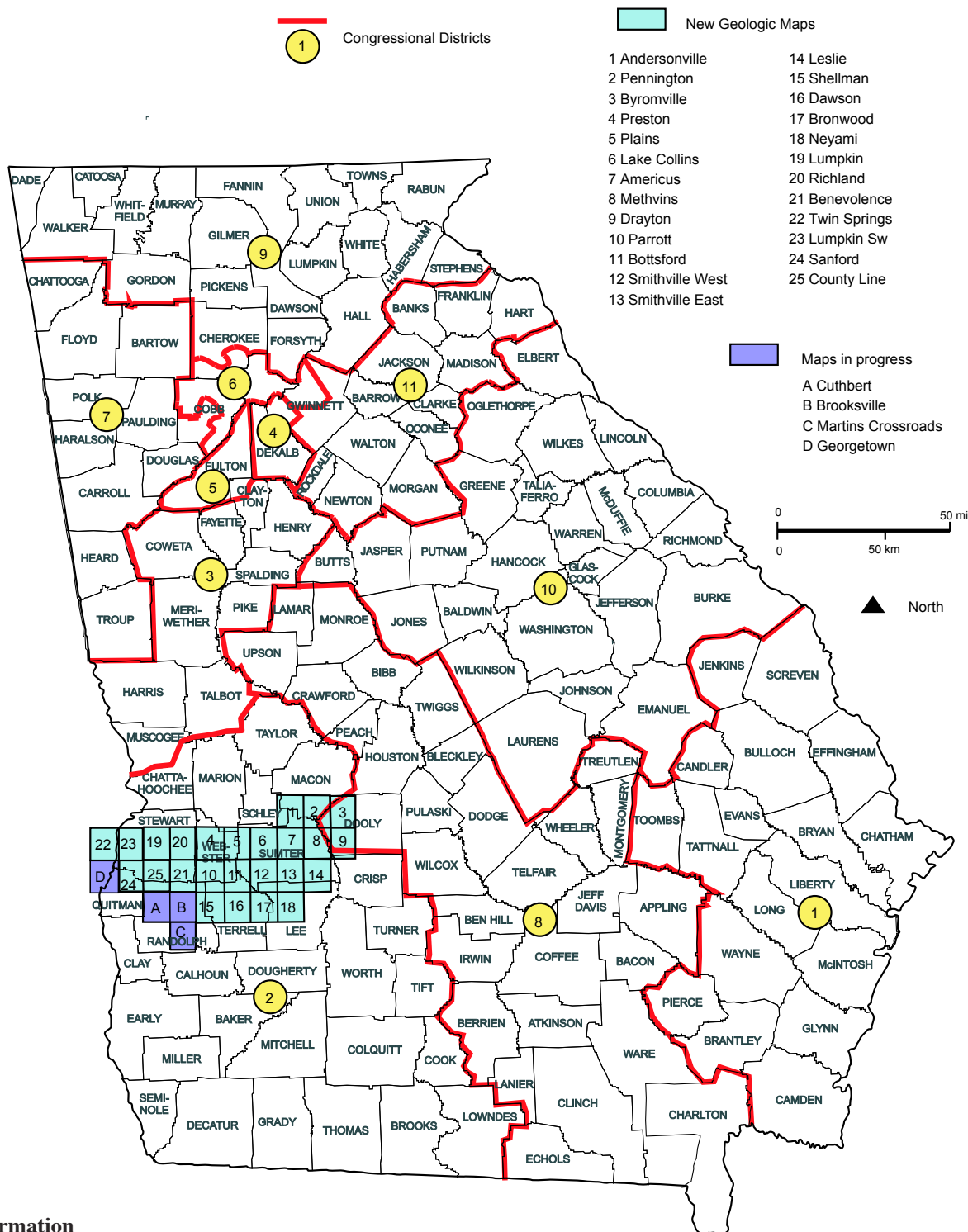
United States
Geological Survey



National Cooperative Geologic Mapping Program

STATEMAP Component: States compete for federal matching funds for geologic mapping

GEORGIA



Contact information

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SUMMARY OF STATEMAP GEOLOGIC MAPPING PROGRAM IN GEORGIA

For eight years the STATEMAP part of the National Geologic Mapping Program has contributed to the completion of new geologic maps in Georgia. Federal funding for new geologic mapping is matched with State funds. Proposals for funding are submitted annually by the Geologic unit of the Georgia Department of Natural Resources Environmental Protection Division to the United States Geological Survey. Geologic maps provide important natural-resource information including the type, age, and horizontal and vertical distribution of bedrock near the earth's surface. Geologic structures (faults, fractured, and folds) that would be exposed if the surficial soils were removed are shown. The maps are prepared on a base that depicts roadways, utility lines, infrastructure, rivers and streams, urban areas, political boundaries, building locations, physiography, elevation contours, and other physical features.

Geologic maps are useful for many purposes, including site selection for public utilities, planning transportation and utility routes, evaluating geologic hazards, land-use planning, environmental assessment and protection planning, development and protection of ground water, regulatory decisions, and natural-resource exploration and development. The maps are used for engineering and construction projects (buildings, dams, roads, bridges, etc.), city and county planning, and for a variety of environmental concerns. They are used for siting waste-disposal facilities, locating new municipal wells, and identifying aggregate sources (sand, gravel, crushed stone and dimension stone) that support urban and infrastructure construction. Geologic maps are useful for evaluating and predicting the consequences of natural and human activities on the environment, and can assist in preventing or minimizing environmental impact or problems.

A recent economic analysis by the Illinois State Geological Survey (1999) of the value of 1:24,000 scale geologic maps was estimated to be \$43,527. Based on that estimate, the projected value of these 33 geologic maps in Georgia would be roughly \$1,436,000.

Federal funding provided by the STATEMAP program (matched by State Funds) has been awarded to the Geologic Survey Branch for eight years and the Geologic unit for an additional year as follows:

Year 1 (7/1/98 - 6/30/99) Federal \$68,631 (3 quads) Year 6 (7/1/03 - 6/30/04) Federal \$66,098 (3 quads)
Year 2 (7/1/99 - 6/30/00) Federal \$80,000 (4 quads) Year 7 (7/1/04 - 6/30/05) Federal \$71,148 (4 quads)
Year 3 (7/1/00 - 6/30/01) Federal \$83,361 (4 quads) Year 8 (7/1/05 - 6/30/06) Federal \$63,044 (4 quads)
Year 4 (7/1/01 - 6/30/02) Federal \$72,500 (4 quads) Year 9 (7/1/06 - 6/30/07) Federal \$51,188 (4 quads)
Year 5 (7/1/02 - 6/30/03) Federal \$70,000 (3 quads) Total \$625,970

The new mapping supported by the STATEMAP program will assist in completing the geologic mapping of the Georgia Coastal Plain south of the Fall Line, which is an important area of recharge for some of the most productive aquifers in the state. The mapping has been performed in portions of Macon, Dooly, Crisp, Sumter, Schley, Stewart, Lee, Webster, Terrell, and Randolph counties. The severe drought conditions experienced in Georgia from 1998 to 2003, and the resulting impacts upon ground water availability and river/stream flow, have significantly increased the importance of accurate and detailed geologic maps which can assist in evaluating and predicting future ground water and surface water availability and limitations. The mapping has identified geologic hazards that affect preservation of agricultural lands, roads, and other infrastructures. In addition, geologic mapping in the economically important Andersonville bauxite-kaolin district identified geologic factors that affect ore quality and quantity.

